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The Trust-Based Communicative Obligations of Expert Authorities

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ABSTRACT *This article analyses the extent to which expert authorities have basic communicative obligations to be open, honest, and transparent, with a view to shaping strategies of public engagement with such authorities. This article is in part a response to epistemic paternalists such as Stephen John, who argue that the communicative obligations of expert authorities, such as scientists, permit the use of lying, or lack of openness and transparency, as a means of sustaining public trust in scientific authority. In this article, I elucidate John's position and reject it. I argue that expert authorities have strong communicative obligations to be open, honest, and transparent, which are grounded in the insight that such authorities hold positions of public trust. After demonstrating how this insight undermines John's position, I conclude the article by considering the implications regarding public engagement with expert authorities.*

Introduction

Prima facie, epistemic authorities have basic obligations to be open, honest, and transparent when communicating with laypersons. Some ground these obligations as part of general moral precepts against telling lies or obfuscating.[1] Others couch them in instrumental terms, noting that *if an expert authority wants public trust, then they should be more open, honest, and transparent*.[2] Both empirical and philosophical scrutiny cast doubt on these explanations. In the Public Understanding of Science (PUS) movement, research controverts the intuitive link between honest, open, and transparent communication and trust building.[3] In philosophy, epistemic paternalists such as Ahlstrom-Vij argue that 'we are sometimes justified in interfering with the inquiry of another for her epistemic good without consulting her on the issue'.[4] Recently, John argues, under an epistemic paternalist framework, against the idea that epistemic authorities, specifically scientists, 'are under any basic obligation to be… honest, open or transparent'.[5,6]

This article has a primary and subsidiary aim. The primary aim is to articulate a positive argument demonstrating that epistemic authorities do have basic obligations to be open, honest, and transparent. My position is grounded in neither general moral precepts nor instrumental reasons; it is grounded in considerations of the relationships of trust between laypersons and epistemic authorities. I argue that insofar as epistemic authorities (1) hold positions of public trust or (2) desire public trust, they are under a trust-based obligation to be open, honest, and transparent, regardless of whether this builds trust or not.

The subsidiary aim of this article is to refute the epistemic paternalist position as articulated by John. John's argument is also trust based, but whereas my trust-based argument supports communicative obligations, John's leads him to the opposite conclusion, thus providing a useful foil for my position.

Section 1 articulates the definitions of trust and trustworthiness employed in this article. Section 2 demonstrates that the communicative obligations of experts arise wherever expert authorities are placed in or desire to be placed in positions of trust. Sections 3 and 4 articulate and rebut John's view that expert authorities are under no basic obligation to be open, honest, and transparent. My arguments have significant implications for our understanding of the communicative obligations of expert authorities and how we ought to conceive and implement public engagement strategies with those authorities. Such implications are considered in Section 5.

Defining Trust and Trustworthiness

In this section, I present a modified account of Katherine Hawley's reliance-based commitment account of trust. On such accounts, trust is conceived of as a special form of reliance distinguishable from other kinds of reliance.[7] Following Hardin[8] and Hieronymi,[9] I reject reliance-based trust accounts and advocate a nonreliance-based version of Hawley's commitment view.

Supporters of reliance-based views of trust often define trust by distinguishing it from other forms of reliance, noting that trust involves different expectations and invokes different reactions when let down.[10] When you break a vow to me I am betrayed, but when my car breaks down I am merely disappointed. Saying my car betrayed me seems inappropriate. The difference in reactions isn't explained by a distinction between reliance on people versus objects. The oft-cited example of Kant's neighbours who, without his knowledge, relied upon the regularities of his walks to tell them the time could not complain of betrayal should he choose to remain inside one day, though they may be disappointed.[11] Hawley's commitment view explains the different reactions with the insight that trust involves commitments while mere reliance does not.[12] When we trust we believe our trustees have commitments to us, and we rely on them to keep those commitments. The paradigm case of commitment is promising. When I promise to keep a secret, I make a commitment to do so, and this generates the obligation to do that thing. If I break that commitment to you, then I betray you because I have failed to meet my obligation to you. These commitments need not be explicit. As Hawley notes:

> I trust my friends not to steal my books when they come to my house, and, at least in some circumstances, I trust strangers to let me walk unhindered.[13]

The commitment view also explains the difference in expectations. When you have a commitment, you have a normative obligation (to some degree) to satisfy that commitment. If I trust you, then I rely on you to meet a commitment, and I have a normative expectation that you satisfy your commitment. In cases of mere reliance, I lack such normative expectations; instead, I merely predict that you'll behave a certain way. Kant's neighbours merely predict that Kant will behave in some way; if he fails to satisfy their prediction, he will not have betrayed them as he has no commitment to

them. In cases of mere reliance, our expectations of others are merely predictive, while in cases of trust our expectations have a further normative dimension. Not only do we predict that those we trust will do what we trust them to do, but we also expect them to do so and react to their success or failure with gratitude or betrayal. The commitment view is an appropriate fit for the context of public trust in expert authorities and trust in organised groups more generally. Minimally, organisations have commitments to satisfy their organisational purposes, whatever they may be. For any organisation then, we can talk of trusting said organisation insofar as we take them to have some set of commitments, and we rely on them to meet those commitments.

I accept that trust concerns commitments but deny that trust is reliance on others to keep those commitments. I distinguish *trust*, which is attitudinal, and *trusting reliance* which is an act of reliance. My definitions of trust and trusting reliance are as follows:

(1) **Trust** – X trusts Y to the extent that X is confident that, were X to rely on Y to keep some commitment, Y would keep that commitment.
(2) **Trusting Reliance** – X trustingly relies on Y iff X takes Y to have a commitment and relies on Y to keep that commitment.

It is important to get clarification on what such confidence amounts to on my account of trust, because an immediate objection to my view could be given by pointing to the following scenario. Suppose an obsessive micromanager compels her workers to keep their commitments to doing their jobs effectively by a set of intensive coercive practices. The micromanager trusts her employees on my account of trust, because she is confident that her employees will meet their commitments. But we would typically describe such a person as not trusting their employees. We must clarify then what confidence means so as to exclude these scenarios.

The work of McGeer and Pettit is useful in understanding the kind of confidence required for trust. McGeer and Pettit claim that an agent's responsiveness to trusting reliance can be measured in terms of its dependability and durability.[14] Dependability is measured in terms of the number of scenarios in which an agent makes good on trusting reliance, while durability is measured in terms of how resistant an agent is to potential inhibitors to their making good on trust. Putting these ideas in terms of my theory of trust, we can say that X trusts Y to the extent that X is confident that Y can be relied upon to meet a range of different commitments (dependability) and to the extent that X is confident that Y won't be tempted to break their commitments (durability). This rules out cases like the micromanager, because the micromanager lacks confidence in the durability of her employees' trustworthiness. She is confident that they will be trustworthy only if many measures are taken to prevent them from lapsing in their duties; this is why she micromanages. Trust, then, is measured both in terms of your confidence that some agent can be dependably relied upon to meet their commitments and that the agent will resist potential inhibitors to meeting those commitments.

Trusting reliance, as I define it, is just Hawley's commitment account of trust, as it is a form of reliance in which you take an agent to have a commitment and you rely on them to meet that commitment. I defend this distinction between trust and trusting reliance by way of two counterexamples below, which demonstrate that trusting reliance is neither a necessary nor a sufficient condition for trust.

Cat Sitter – Judith needs a cat sitter for Tibby while she is out of town. Her friends Danny and Annabelle are both lovers of cats, and Judith takes them to be equally competent and willing to do the job. However, she asks Danny (who accepts) rather than Annabelle, because he lives on her street whereas Annabelle lives in the next town.

Suppose Annabelle complains to Judith, 'why don't you trust me?' Judith replies, 'of course I trust you Annabelle, but I'm letting Danny look after Tibby because he lives closer to me than you'. In saying this, Judith communicates to Anabelle that her confidence in Anabelle's ability to make good on her commitments is just as strong as her confidence in Danny's ability to make good on his commitments; however, since she only needs one cat sitter, she has allowed convenience to be the deciding factor in who to trustingly rely on. Annabelle may still be disappointed that she doesn't get to look after a cat, but if she thinks that Judith is honest in her explanation, it would seem odd for her to maintain that Judith does not trust her, given that Judith has the same positive assessment of her friends' characters, and her only reason for choosing to rely on one rather than the other was grounded in considerations external to their character. If Judith's justification of her trust in Anabelle is correct, then *Cat Sitter* demonstrates that it is possible to trust without having trusting reliance and thus that the latter is not a necessary condition of the former.

Cheating – Sam's partner Susan has cheated on him. However, both decide that they want their relationship to continue. Sam has significant doubts at first that Susan will live up to her promises; nevertheless, he refrains from checking up on her in any way, recognising that to do so would not allow their relationship to get back to how it was.

Sam trustingly relies on Susan to keep her commitment to fidelity, but his suspicions suggest that he does not yet trust her. Some philosophers would characterise *Cheating* as 'therapeutic trust',[15] defined as an instance of trust where a doubtful person like Sam trusts a person who is not yet trustworthy to encourage them to be so.[16] I disagree. Sam trustingly relies on his partner despite his doubts because he *wants* to trust her again, not because he trusts her *already*. Therapeutic trust is not genuine trust, but a form of trusting reliance where one trustingly relies on someone to build or strengthen the trust that is either weak or not present.

The separation of trust and trusting reliance forces me to reject a commonly accepted intuition about trust. Many philosophers claim that trust requires us to make ourselves vulnerable to others in the sense that if I trust you to do X, then I am vulnerable to betrayal.[17] Because my account of trust is attitudinal, it is trusting reliance and not trust that makes one vulnerable to betrayal. On this, I have two points. First, the separation of trust from trusting reliance is both useful and, as the previous examples suggested, grounded in commonplace uses of trust. Secondly, vulnerability is still related to my conception of trust in the following sense: if I trust you, then I judge that you are an appropriate object of my trusting reliance to some extent. In trusting you, I may not make myself vulnerable to you, but the confidence that I have makes me more likely to do so in the right circumstances. Thus, trusting others may increase our dispositions to make ourselves vulnerable to others by relying on them trustingly.[18]

A Position of Trust

This section sets up my positive argument that epistemic authorities have communicative obligations to be open, honest, and transparent. My argument rests on the insight that insofar as epistemic authorities (1) have positions of public trust or (2) desire positions of trust, such positions can only be held legitimately if they both *deserve* and *earn* the position.

Let's start by defining a position of trust. If X has a position of power, and that position of power allows them to direct, influence, or otherwise shape the lives of some less powerful agent, then X is in a position of trust with respect to that agent. This is a position of trust in the sense that, when X holds such a position of power over Y, Y is placed in a dependency relation to X, such that Y is vulnerable to the use and potential abuse of X's power. For my purposes, there are two salient ways positions of trust are established:

(1) X is placed in a position of trust by Y when Y trustingly relies on X, *and* X (explicitly or implicitly) accepts that trusting reliance (or when Y encourages X to trustingly rely on Y, *and* X does so)
(2) X is placed in a position of trust over Y, when either X makes themselves a trustee in a matter that concerns/impacts Y, or where some other Z makes X a trustee in a matter that concerns/impacts Y.

The first way is an instance where trusting reliance establishes the position of trust. The second way is an instance where the position of trust is established not via trusting reliance – which may or may not be present – but by some other force, such as the powers of the trustee, or the powers of some further agent(s). Though, as we see in (2), positions of trust can be established without the consent of trustors; it is difficult to put someone in a position of trust unless they accept the position. If I walk up to you, hand you my newborn son and tell you that I trustingly rely on you to take care of him, I might be attempting to rely on you to keep a commitment, but you do not have said commitment unless you accept it. Moreover, I cannot fairly say that you behave untrustworthily by refusing to look after my baby, since to be untrustworthy you must break commitments that you have, but in this case you have no commitment. We can, however, trustingly rely on others without their consent if there exists some prior obligation to satisfy trusting reliance. For example, if we suppose that speakers make an implicit commitment to truth telling when they make assertions, then it is within one's moral rights to trustingly rely on one's interlocutors to speak honestly, even if the interlocutor does not explicitly make such a commitment. Of course it may not always be wise to do so (say your interlocutor is a compulsive liar), but in such a case, the commitment is still there, and so even if you do not trustingly rely, you can fairly say that the interlocutor is untrustworthy and express your distrust in them as a speaker.

Epistemic authorities may garner positions of trust along either avenue. An individual who trustingly relies on a doctor for advice puts the doctor in a position of trust in the first sense. On the other hand, if a group of scientists is trusted by the government to comment on a matter of public policy, the scientists are accorded a position of public trust in the second sense. The reason that scientists are in a position of trust to the

public – not just the government – is because their position grants them the authority to comment on and shape matters of public concern. Thus, such authorities are granted powers over the public and hold positions of public trust. It does not matter for my argument in favour of the trust-based obligations of epistemic authorities just how scientists are accorded positions of public trust. All we need accept is that epistemic authorities often hold such positions of public trust and ask what their communicative obligations are in such cases.

Now that we understand what positions of trust are and how they can be established, we can now turn to ask what it means to legitimately hold such a position. It is my claim that positions of trust are legitimate only insofar as the person in the position *earns* and *deserves* the trusting reliance of the person(s) under that dependency relation. In order to deserve a position of trust, the holder must be capable of making good on what the position entails. To be in a position of a trust as a teacher of philosophy, I must – minimally – be competent in the subject and capable of teaching. However, it isn't enough just to meet the criteria for being capable of satisfying the position, I must also *earn* that position. Suppose I know that I am a wonderful philosophy teacher, and in consequence I shout and scream that I ought to be made a philosophy teacher without any kind of demonstration of my talents. Although I might deserve the position in terms of having the inner talents required, I have not earned the position and should not just expect society to put their trusting reliance on anything but my claims about what a good teacher I am.

If an agent – say, some epistemic authority – then, either has been placed in a position of trust or desires a position of trust, then they have trust-based obligations to satisfy two conditions in order to hold that position legitimately. Firstly, they must ensure that they are deserving of the trusting reliance those they hold the position over, in the sense that they are capable of making good on the position held. Second, they must ensure that they have earned the trusting reliance of those that they hold the position over, even if that position was granted them by an external authority, such as the government. Just what it means to earn and deserve a position of trust is something that will depend on the details of the position of trust and what it involves, and it is these considerations that will ultimately push us against epistemic paternalism and towards trust-based obligations to be open, honest, and transparent. Before we get to that point, however, let's consider the alternative viewpoint against trust-based obligations to be open, honest, and transparent.

Against Openness, Honesty, and Transparency

The previous section established that epistemic authorities holding positions of trust have trust-based obligations to ensure that they earn and deserve the trusting reliance of those over whom they hold positions of trust. However, it tells us little about their communicative obligations when it comes to earning that trusting reliance. To deduce those, we must determine what authorities are in positions of trust with respect to. An intuitive answer is that they are in a position of trust with respect to the epistemic domain as this is where their expertise resides – that is to say, they hold positions of epistemic trust.[19] Accepting this, John justifies his arguments against basic obligations of openness, honesty, and transparency. He begins by setting up a framework

explaining how nonexperts learn from experts, which he equates with epistemic trust.[20] John does not provide a general account of trust as I do; instead, he focuses solely on trust as it arises in an epistemic context. I argue in section 4 that this narrow focus is what enables John to conclude against openness, honesty, and transparency, but first I must outline his view, starting with a brief outline of what it means to be in a position of trust with respect to the epistemic domain.

Epistemic trust concerns the ways we trustingly rely on others to help form and shape our beliefs about the world.[21] When X epistemically trusts Y, he judges that when she asserts something in her field of competence, if that assertion differs from what he would assert, then her assertion has greater epistemic weight than his own.[22] If X epistemically trustingly relies on Y, then he ascribes authority to her in the sense that he is more likely to defer to Y when she asserts claims in her domain, and he will allow Y's beliefs about the world to shape his own.[23] Thus, if X is in a position of trust with respect to the epistemic domain, then X is in a position in which some of X's beliefs or assertions (those beliefs/assertions within X's domain of competence) are taken to have more credence than those who do not hold that position of trust. Those who lack X's position of epistemic trust then are expected to defer to X's beliefs and assertions within X's domain of competence and to allow X's beliefs and assertions to shape and influence their own.

To make his argument against openness, honesty, and transparency, John uses the example of the 'Climategate' controversy, which began when an archive of roughly 1000 emails from the Climate Research Unit at the University of East Anglia was leaked to the public in 2009.[24] Climate sceptics used the emails to attack climate scientists for engaging in unprofessional behaviour, alleging a scientific conspiracy to misrepresent climate data to exaggerate warming trends and colluding to suppress alternative viewpoints by influencing the peer review processes of journals.[25] While investigations into the professional conduct of the scientists largely exonerated scientists of these charges, the politicized nature of climate change research has left room for continued accusations and controversy.[26]

John provides an account of how trust broke down due to Climategate. He argues that because the 'flawed' scientific processes allegedly 'exposed' by email hackers were legitimate scientific processes,[27] the trustworthiness of climate scientists as epistemic authorities is exonerated. To put this in the terms of the previous section, the claim here is that scientists meet the desert condition for holding their positions of trust. He claims that because climate scientists are appropriately trustworthy, public trust in science is warranted. However, he notes that warranted public trust may be founded upon false beliefs about scientific institutions and practices, what he calls a 'false folk philosophy of science'.[28] Because public trust may be grounded in this false folk philosophy, John claims public trust is fragile. Bearing these preliminaries in mind, John argues that genuine climate sceptics, many of whom he assumes to be agnotologists[29] – people who deliberately and wilfully maintain ignorance to further their political or social ends[30] – prey on public false folk philosophies of science.[31] When agnotologists 'expose' scientific practice, as in Climategate, they undermine warranted public trust by showing the discrepancy between the false folk philosophy of science and how science is practised. In consequence, warranted but fragile public trust is broken. To avoid breaking fragile trust, John claims that it is justifiable for scientists to 'play along' with false folk philosophies of science. If we need to be less honest, open, and

transparent about scientific practise to maintain warranted but fragile trust, then we should do so because scientists are trustworthy, and it is better to trust what is trustworthy, even if that trust is grounded in false beliefs.

John's justification of the communicative obligations of scientists mirrors similar arguments from epistemic paternalists such as Vij-Alstorm, who use the notion of *epistemic interests* to justify paternalistic practices of science communication.[32] The thought here is that epistemic authorities are justified in lying, or being less open and transparent, just so long as their doing so is in the epistemic interests of nonexperts. In the climategate example, John presents a convincing argument that it is in the epistemic interests of nonexperts to trust scientists, even if that trust is grounded in a false folk philosophy of science. It is in their epistemic interests because, as the controversy showed, the epistemic practices of science criticised by agnotologists were in fact legitimate practices, thus vindicating the trustworthiness of scientists as epistemic authorities. Since scientists are epistemically trustworthy, trusting scientific testimony is in the epistemic interests of nonexperts because it will cause them to have more true beliefs; whereas if one were to listen to the agnotologists, or if scientists were to reveal everything about its methods and practices, nonexperts would have fewer true beliefs. Thus, it is in the epistemic interests of nonexperts for scientists to (sometimes) be less open and transparent and honest, if scientists know that being fully open, honest, and transparent is more likely to cause false beliefs or distrust in science.

The descriptive fact that it is in the epistemic interests of nonexperts for scientists to lie, or to be less open and transparent, is not enough to demonstrate John's normative claim that 'claims about experts' communicative obligations towards nonexperts should, ultimately, be grounded in claims about what will further nonexperts' epistemic interests.[33] In making this move, John appeals to the intuition that, fundamentally, what we are concerned with when it comes to our trust in expert authorities is, or at least that it should be, the promotion of true beliefs among nonexperts. As he states at the conclusion of his climategate example, 'if we care about the promotion of true belief, we should not demand that scientists are transparent and open'.[34]

In order to determine whether scientists or experts are justified in privileging the epistemic interests of nonexperts, two conditions must be *jointly* satisfied. First of all, it would need to be the case that the position of trust accorded to experts is a position of epistemic trust *only*. If experts are only put in a position of trust in order to promote true beliefs, then it is this that experts should be primarily concerned with when making good on that position. However, if the position of trust accorded to an expert gives them power to shape nonepistemic matters, be it influencing issues in moral, social, or political domains, then the idea that they are justified in privileging the epistemic interests of nonexperts is no longer so obvious. I discuss this condition below in Section 4.1.1. The second condition that must be satisfied in order to privilege the epistemic interests of a trustee is that the position of trust of scientists is legitimised through the earning of the trusting reliance of trustees. I turn to the topic of what it means to legitimately earn a position of trust in 4.1.2. The reason that these conditions must be jointly satisfied is that positions of trust, whatever they may involve, must be legitimised by ensuring that the agent holding the position has the trusting reliance of those that they hold the position over. As such, even if the first condition were met, and scientists were justified in acting in the epistemic interests of

nonexperts, they would also need to ensure that their positions of trust were legitimised by having the trusting reliance of nonexperts.

Defending openness, transparency, and honesty

The following subsections present two independent trust-based arguments in favour of openness, transparency, and honesty.

The first argument (Section 4.1.1) works via an objection to John's epistemic paternalist claim that the communicative obligations of scientists should be grounded in the epistemic interests of nonexperts. The argument goes thus: given that the positions of trust often accorded to scientists range over the moral, social, and political domains as well as the epistemic domain, the communicative obligations of scientists must be grounded in concerns about the interests of nonexperts in these further domains. I also note that insofar as scientists find themselves in positions of trust that range over nonepistemic domains, as scientists are not expert in these nonepistemic domains, they do not possess the level of trustworthiness that would be required of them to adopt an epistemic paternalistic approach to communication.

The first argument only nods in the direction of greater openness, honesty, and transparency. The second argument (Section 4.1.2) provides experts with trust-based obligations to be open, honest, and transparent. I argue that even if the arguments of Section 4.1.1. fail, scientists still have trust-based communicative obligations to be open, honest, and transparent in cases where they have yet to earn public trusting reliance and in cases where public trusting reliance is known by scientists to be founded upon false beliefs.

The political, moral, and social consequences of 'epistemic' trust

Philosophers of science and academics working on Public Engagement with Science (PUS) note the nonepistemic public expectations of science. Resnik notes the public expectations that scientists use public recourses well, provide information and knowledge that help inform policy debates, conduct research useful across many sectors, from medicine, industry, and engineering to technology, agriculture, etc.[35] Grasswick claims that we trust 'researchers to filter information for us, determining what the best understandings of the day are and omitting poorer quality, less important, or outdated research, and second… to treat stakeholder populations, including research subjects, ethically and not place them at too great a risk in the pursuit of knowledge'.[36] These expectations are nonepistemic; they require social, political, and moral awareness when conducting experiments, when determining how to use public resources, and to consider the moral implications of studies and to conduct research accordingly. As noted in Section 2, the mere presence of public expectations does not confer trust-based obligations to scientists. However, when scientists accept positions of trust such obligations arise.

Cases in the PUS literature demonstrate that traditionally 'scientific' issues often have moral, social, and political dimensions.[37] This echoes the philosophical line that scientific inquiry is, at least to some extent, value laden, and that it is difficult, if not impossible, to frame, research, test, and provide public policy recommendations on the back of research in ways not grounded to some extent in nonscientific values.[38] Despite this, many cases discussed by PUS researchers reveal a failure to appreciate

this, with supporters of scientific inquiry taking such inquiries to be objective and definitive while denigrating public voice as irrational or disingenuous when it resists scientific expectations.[39] This isn't always the case; climate change is one example where the roles are reversed, but we postpone discussion of such cases until the next section. In this section, I demonstrate that because scientific inquiry is value laden, the positions of public trust held by scientists range over both epistemic and nonepistemic domains. This insight refutes the epistemic paternalist claim that the communicative obligations of experts should be grounded ultimately in the epistemic interests of nonexperts and supports the conclusion that obligations should be grounded in concerns about all salient interests, which includes moral, social, and political interests.

The genetically modified (GM) crops controversy from the United Kingdom in the late 1990s and early 2000s is a case commonly used by philosophers and PUS researchers to demonstrate how value-laden scientific inquiry can be.[40] Grove-White summarizes the controversy and its key elements in the following passage:

> The period of 1996–1999 was one of mounting public controversy in Britain about the apparently imminent prospect of GM agriculture. Following Monsanto's well publicized first shipment of GM soya to the UK in mid-1996, public discussion developed rapidly. Against a recent background of the BSE and other food and environment-related alarms, top down 'sound science' assurances of the 'safety' (the latter assumed to be the sole object of public concern…) of the indigenously grown GM crops simply fanned the flames. Meanwhile, independent social research was revealing mounting unease about a host of rather different social, ethical and environmental dimensions of the GM prospect: Why was this being done? For whose benefit? With what implications for the food chain, and for agriculture and food production more generally? Who would be accountable when unanticipated things went wrong? But the government, repeatedly invoking the authority of its key scientific GM advisory body, the Advisory Committee on Releases into the Environment (ARCE) insisted that only science… could decide the matter[41]

The GM controversy does pose issues best answered via scientific methods, such as the safety of the crops. However, as Biddle notes, there are other factors to consider, some of which are not resolvable by science.[42] The implementation of GM crops involves the implementation of a new technology, which raises political questions (Who is driving the changes? Who will be accountable?), social questions (How will this affect farmers, agriculture, etc?), and ethical questions (Should we tamper with nature?), as well as questions of risk (Might something go wrong in the future that we cannot know about right now?). As Biddle and Grove-White argue, scientists and governments overlooked many of these broader questions because they were not captured by their narrow, scientific, epistemic framing of the issue.[43] Such a narrow epistemic construal of the issue is incomplete because it ignores its social, political, and moral dimensions.

To be accorded a position of trust as an epistemic authority in the GM case is to be accorded a position of trust not just in the epistemic domain, but also the social, moral, and political domains. If trusting reliance on scientists is to match that position of trust, then it must range over all relevant domains. As such, in order to legitimately

hold a position of trust, one must have public trusting reliance with respect to the moral, social, and political domains as well as the epistemic. Failure to satisfy any one case can result in warranted public distrust or refusal to trustingly rely on the epistemic authority.

Consider the following example. I may epistemically trust Dr Frankenstein regarding his knowledge of corpse reanimation. However, I lack broader trust in Frankenstein because that requires confidence that he can be trustingly relied upon in other domains, moral, social, and political, that he – conducting dangerous experiments, treating his creature poorly, and his general recklessness and insanity – is not trustworthy in. Moreover, even if he behaved ethically, I might resist his normative claim that we ought to reanimate corpses because the normative question of corpse reanimation cannot be answered purely by reference to scientific facts. Thus, if Frankenstein was accorded a position of trust enabling him to conduct experiments in these unethical ways and implement corpse reanimation, he would not have legitimised his position of trust, because I refuse to trustingly rely on him until he addresses the broader social, moral, and political issues surrounding his experiments.

John's justification for epistemic paternalism depends on two points which fail once one accepts that traditionally 'scientific' issues are nonepistemic as well as epistemic issues. The first point John depends on is the broader epistemic paternalist intuition that the communicative obligations of scientists should be based on what is in the epistemic interests of nonexperts. As noted in Section 3, this intuition depends on the assumption that science is in a position of epistemic trust centered on the promotion of true belief. However, if scientists hold positions of trust in nonepistemic domains, then the communicative obligations of science to the public must account for those domains. When determining whether a lie might be permissible, scientists cannot privilege the epistemic interests of nonexperts over their nonepistemic interests. It might be in my moral interest to know what is going on in the scientific process, or my political interest to know how the politics of scientific institutions shape their claims, or in my social interest to know what the social impact of scientific research may be on people in my social group.[44] Scientists may not, at least without substantive argument, disregard broader interests when these interests are relevant to the trust relation.

The acknowledgement that the communicative obligations of experts must be grounded in concerns about the moral, social, and political interests of nonexperts in addition to concerns about their epistemic interests does not necessarily lead to a trust-based obligation in favour of openness, honesty, and transparency. At most, it suggests that a bespoke approach to science communication is called for, one that always takes into account the salient set of interests, be they epistemic, social, political, social, or other interests. That will likely depend on the issue at hand; are we talking about GM crops, cloning, or climate change, or are we talking about some abstract theory in theoretical physics? We can, however, get a stronger trust-based obligation towards openness, honesty, and transparency by rejecting the second point that John's epistemic paternalist argument depends on.

In his Climategate example, John notes that public trust in scientists is fragile – because they are grounded in false folk philosophies of science – but warranted because scientists are epistemically trustworthy. Because scientists are epistemically trustworthy, John argues that it is permissible for scientists to lie, or be less open or transparent, so as to preserve the warranted but fragile public trust in science. This

idea that trust is 'warranted' can be put in terms of scientists meeting the desert condition for legitimising positions of trust, that is, they have the capacities to make good on the position of trust held. However, if the position of trust accorded to scientists is also a position with social, moral, and political dimensions, then to meet the desert condition, scientists must be trustworthy with respect to these dimensions as well. As such, it becomes no longer obvious that scientists, who are epistemic authorities within their fields, are appropriately trustworthy, because they are neither moral, social, nor political authorities. If this is the case, then trust in science is no longer warranted because scientists lack the trustworthiness that matches their position of trust. If scientists were merely in positions of epistemic trust, then John's argument that trust in science is warranted would go through, because the kind of trustworthiness required to make good on the position of trust is had by scientists. But in recognising the moral, social, and political dimensions of positions of trust in science, it no longer holds that trust in science is warranted, whether founded on false beliefs or not, because scientists lack trustworthiness across the relevant domains. It was the fact that trust in science was warranted that allowed John to make his paternalistic move; since scientists have warranted but fragile trust, it is permissible for scientists to paternalistically preserve that trust by being less open, honest, and transparent. However, if the trust isn't warranted, it becomes hard to justify that the claim that scientists can preserve unwarranted trust by being less open, honest, or transparent.

In this section, I argued against the epistemic paternalist position as formulated by John by refuting two of its key claims. I rejected the claim that the communicative obligations of scientists should ultimately be grounded in considerations regarding the epistemic interests of nonexperts, and I rejected the claim that trust in science is warranted. Both claims were rejected through the insight that the positions of trust accorded to scientists often range over the social, moral, and political domains. To the extent that this is so, the communicative obligations of scientists should be grounded in concerns regarding these further domains. Moreover, to the extent that scientists hold positions of social, moral, and political trust, as they are not authorities in these domains, one cannot say that public trust in such cases is warranted, because for trust to be warranted, the trustee needs to meet the desert condition. The failure of these claims does not, of necessity, lead to trust-based obligations to openness, honesty, and transparency because it may turn out that even with a balancing of nonepistemic interests, one can still justify such strategies. It is likely that what strategies are available will be bespoke, changing depending on the intersection of the epistemic and nonepistemic domains, as well as factors such as risk. Such complexities are beyond the scope of this article, but, I think, will provide fertile ground for future research. The aim of this section was to primarily provide a refutation of the epistemic paternalist arguments of John. In the next section, I present a second and independent argument which demonstrates that, even if the epistemic paternalist can respond to the arguments in this section, there are in fact strong trust-based obligations to be open, honest, and transparent, both in earning and legitimately maintaining the trust of others.

Relationships of distrust and ill-founded trust

In this section, I argue that, if, either X does not trustingly rely on Y or X's trusting reliance on Y is founded on false beliefs, then it is morally impermissible for Y to gain or retain X's trusting reliance by failing to be open, honest, or transparent, regardless

of X's epistemic interests and regardless of whether Y is trustworthy. This argument shows that even if one concedes that scientific trust is purely epistemic, it remains impermissible to fail to be open, transparent, or honest when earning and maintaining the trust of others. Thus, I demonstrate a more fundamental trust-based obligation on both potential and actual trustees to be open, honest, and transparent.

Assuming scientific trust is epistemic trust and assuming there is currently trusting reliance in scientists, scientists may be less honest, open, and transparent to satisfy the epistemic interests of their trustees. In cases where trusting reliance is not placed, while less openness, honesty, or transparency still serve the epistemic interests of the distrusting person, the lack of trusting reliance changes the picture. I can refuse to trustingly rely on you for a number of reasons, the most obvious being that I distrust you. When I distrust you, I take you to be someone who, were I to trustingly rely on you to meet some commitment, would not keep that commitment.[45] I may also refuse to trustingly rely on you because I do not yet know whether I trust you or not. Whatever my reason, if I do not trustingly rely on you, then I have not granted you the discretionary powers accorded to those who have my trusting reliance to act in my interests. I have not given you, for instance, the discretionary power that I give a doctor who I trustingly rely upon, to act in accordance with my interests in such a way that might justify a lack of openness, transparency, or honesty. It is my trusting reliance in you that gives you the right to act in my epistemic interests, but if I do not trustingly rely on you, then I have not given you any such right. However, in a case where you lie to me or obfuscate in order to gain my trusting reliance quicker, you are presuming a right to act in my epistemic interests that I have not given you, or, in a case of distrust, you are presuming a right to act in my epistemic interests despite my active resistance to such a thing.

In Section 2, I demonstrated that if X is in a position of trust, then X is committed to (and thus has an obligation to legitimise that position by) earning the trusting reliance of those who X holds the position over. I left it open then just what it meant for an agent in a position of trust to earn the trusting reliance of a trustee, but now I can answer that question. In the case of the positions of trust of experts, these positions are established oftentimes without the trusting reliance of the majority of the nonexpert population, but they are instead established by the powers of powerful organisations, public or private, who call on experts to shape and influence matters of public concern. As such, experts must legitimise their position by ensuring that they earn broader public trusting reliance. Even if we assume that experts deserve the position, in the sense that they are epistemically trustworthy and their positions of trust are solely epistemic, if experts gain the trusting reliance of the public through lies, obfuscation, or by 'playing along with false folk philosophies of science', then they have already presumed on the trusting reliance of nonexperts before they have earned it. What justifies the telling of lies or obfuscation is a presumed right to act in the epistemic interests of nonexperts, but it is just that right that trusting reliance is supposed to establish. In order to earn the trusting reliance of nonexperts, then, experts may not act in ways that presuppose the trusting reliance of nonexperts. To lie or obfuscate in the name of the epistemic interests of nonexperts is to make such a presumption and thus is an illegitimate way to earn the trusting reliance of nonexperts.

The previous paragraphs examined cases where scientists lack the trusting reliance of nonexperts. However, what about cases in which there is trusting reliance, but

where that trusting reliance is grounded in false beliefs, such as a false folk philosophy of science? In such cases, John believes trust grounded in false beliefs is warranted just so long as the trustee is trustworthy.[46] I disagree with the thought that trust grounded in false beliefs is warranted so long as the trustees happen to be trustworthy. As trustors, we don't merely desire to trust the trustworthy, but we desire to trust well. Trusting well requires more than merely happening to trust the trustworthy; it requires trusting for the right reasons, reasons that are in some way connected to the actual trustworthiness or untrustworthiness of our trustees. To some extent, this is a responsibility for trustors to get right themselves. If you trust me for the wrong reasons, I can't be expected to know this in advance, nor should it be an obligation of mine to double check that your reasons for trusting me, whether I am trustworthy or not, are ill-founded. That said, in a case where I am aware that your trusting me is grounded in false beliefs about me – suppose you trust me because you think we are best friends, but that I actually don't like you very much – it seems like I am doing something wrong in maintaining that trusting relation between us.

While the above reason seems to be a moral reason, and I think there is certainly a moral reason there, there is also a trust-based reason not to knowingly play along with trustors whose trusting reliance is founded on false beliefs and expectations. One of the central problems in trust relations between the public and epistemic authorities, one which John is all too aware of, are cases in which the public have this false folk philosophy of science. For instance, the popular public conception that science ought to provide definite, yes/no answers, and that scientific inquiry is 100% objective, can give rise to the false expectation that scientists should provide such objective and definitive answers, and where science cannot provide such certainties, we should be dubious of their claims. As John would agree, these false expectations can lead to unwarranted distrust in science – unwarranted in the sense that the distrust is grounded in the false expectations about what science is and what it does. However, if scientists knowingly play along with those false beliefs, what they signal to trustors is not only that their trust is well-placed, but that their expectations in trusting are the right expectations. Doing this signalling in full knowledge validates the wrong expectations of the trustors. If exposed, and if the trustor knows that you knowingly played along with their false expectations, they can rightfully complain that you behaved wrongly here, that you 'led them along' in their misconception of the relation. In addition to this, when scientists knowingly play along with these false expectations, they are setting themselves up to be trustingly relied upon as orators of definitive, objective truths, a position which they know they should not have, because such beliefs about science are false. Thus, scientists help create and shape an ill-founded trust relation which they in turn accept by reinforcing and validating the false expectations and beliefs on which the trust is based. Therefore, in order to legitimately maintain a position of trust, if you know that your trustor has false beliefs and expectations, you must ensure that you set the trustor on the right path, lest you put yourself in a position of trust that you ultimately cannot satisfy. Doing so requires you not only not to play along with false expectations, but to be open, honest, and transparent about what trustors can and should expect of you, and what they cannot.

In conclusion, there are trust-based obligations to be open, honest, and transparent when it comes to legitimising one's position of trust. If I hold a position of trust, say, as an epistemic authority, I have a commitment to legitimising that trust by ensuring

that I earn the trusting reliance of those I hold the position of trust over. In earning that position, I cannot take any actions that already presuppose the trusting reliance of my potential trustors. When I lie, obfuscate, or play along with false beliefs, justifying my actions because 'it is in the interests of those potential trustors', I am doing just that. I take it as my right to act in the epistemic interests of others, but it is just that right to act in the epistemic interests of others that trusting reliance is supposed to give! In addition, even in cases where one has the trusting reliance of trustors, if one knows that this trusting reliance is founded on false beliefs and expectations, one is under an obligation to set one's trustor on the right path, and once again, this requires openness, honesty, and transparency surrounding those beliefs. It does not, then, permit playing along with false beliefs about oneself. To knowingly validate the false expectations of trustors is to tacitly commit oneself to being held to those expectations, and in the case of science, this can mean being held to a standard that scientists cannot meet, because science does not work according to those false expectations and beliefs.

Conclusions and Implications for Public Engagement

In this article, I argued that the communicative obligations of scientists to be open honest and transparent are trust-based obligations that cannot be overridden in order to satisfy the epistemic interests of the populace. The positions of trust often taken by scientists have social, moral, and political dimensions, and thus public trusting reliance ranging over all relevant domains is required to legitimise the position of trust. Scientists cannot overlook those further domains when engaging with the public, and they should be sensitive to the thought that public disputes over science may boil down to distrust in science along those domains. Finally, I argued that because scientists are in positions of trust, they are obligated to gain and maintain public trust to legitimise those positions and that they must meet this obligation through openness, honesty, and transparency, capturing all domains that they are in a position of trust in. These conclusions apply to any authority in a position of trust. Being in a position of trust requires you to gain and maintain the trust of those you have power over to legitimise that position.

From these conclusions, I pose two tentative thoughts regarding the practice of public engagement in science. The recognition that scientific trust goes beyond the epistemic domain should support and promote public engagement that reaches these further domains. Moreover, since distrust in science may be caused by distrust in nonepistemic areas, scientists should be prepared to engage in these further debates and assume that it is likely that public resistance to science is often embedded in concerns in these further domains, rather than assuming public idiocy or willful ignorance, which is what happens when scientific distrust is equated with epistemic distrust for epistemic reasons. Engaging in these further debates allows epistemic authorities to earn public trusting reliance even though they may lack expertise in nonepistemic domains because it requires (1) acknowledgement that 'scientific' issues often have political, social, and moral dimensions that scientists are not expert authorities on and (2) the incorporation of public voice into the discourse as a means of filling the gaps in these domains. If I'm trusted to throw a wine party though I know

nothing about wine, I can remain trustworthy just so long as I get the relevant help from the relevant expert. Likewise, even though scientists may lack moral, social, and political expertise, and have difficulty incorporating those dimensions into research, the opening up of public dialogue, and honesty about the variety of values underpinning scientific inquiry, can ground the trusting reliance required by positions of trust that range over both epistemic and nonepistemic domains.

Finally, I want to remind the reader that trust is not necessarily the supreme value for authorities to consider.[47] Trust can require us to do terrible things. Situations may arise where morality or extreme circumstances weigh against satisfying trusting reliance. Climate change, due to the urgency of the problem, may well be a paradigm example of this. However, it is important to stress that breaches of trust are betrayals regardless of the justification. While people can forgive breaches of trust in extreme circumstances or where there are moral conflicts, they are not obligated to do so. Moreover, betrayals of trust, even when done for good reasons, always raise questions about the general trustworthiness or untrustworthiness of an organisation or individual, so one must be very careful in handling such cases.

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NOTES

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12 Hawley (2019) op. cit., p.9.
13 Ibid, p.10.
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43 Grove-White (2006) op.cit, and Ibid.

44 Grassiwck's (2018) op.cit. is motivated in part by these concerns.

45 This is a nonreliance adaption of Hawley's view of distrust; (2019) op. cit., p.9.

46 John, (2018)a op. cit., p.81.

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